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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/631,900 | 08/04/2000 | Salman Akram | 500185.03 | 2472 |

27076 7590 09/10/2002

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| EXAMINER |
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CRUZ, LOURDES C

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| ART UNIT | PAPER NUMBER |
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2827

DATE MAILED: 09/10/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/631,900

Applicant(s)

AKRAM ET AL.

Examiner

Lourdes C. Cruz

Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 November 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-12 and 15-17 is/are pending in the application.
- 4a) Of the above claim(s) 15-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3 and 5-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 15-17 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 13.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1,3, and 5-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Sako (US Patent No. 6137183).

Regarding claims 1 and 9, see that Sako discloses a bumped device 1 having conductive bumps 2; a substrate 4 having pockets – See Fig. 2—disposed therein and pads 8 aligned with the bumps, the pads being at least partially disposed within one of the pockets; and an anisotropic conductive layer 3 disposed between and mechanically coupled to the device 1 and the substrate, the anisotropic layer electrically coupling each of the conductive bumps with a corresponding one of the contact pads.

Sako also discloses:

- Bumps engaged within the pockets –Claim 3—
- A thermosetting/thermoplastic anisotropically conductive adhesive comprised in the conductive layer – Claims 5,6,12—
- Conductive particles in the conductive layer (Col. 6, lines 52+) – Claim 7—
- At least some of the particles in contact with the bump and the pad and forming a conductive path – Claim 8—
- The conductive layer having a flexible outer surface –Claim 10—
- The conductive layer having a resilient outer surface – Claim 11—

Response to Arguments

Applicant's arguments filed have been fully considered but they are not persuasive. Applicant argues that:

- Sako does not disclose pockets in the substrate nor does Sako disclose contact pads within a pocket
- What the examiner believes to be a pocket is a deformation in the ACF resulting from pressing the chip into the ACF
- What the examiner believes to be a bonding pad is a mixture of adhesive with ACF as a result from pressure
- In contrast with Sako, a contact pad “is an electrically conductive material, usually a metal, which is typically attached to a lead...”
- Sako fails to teach partial engagement of the bumps
- Sako teaches away from using a thermoplastic material

- Sako fails to teach a flexible surface for the anisotropically conductive film

The above arguments have been fully considered but are not persuasive for the following reasons.

- Sako clearly teaches a substrate 4 and pockets (unlabeled portion wherein 2 is deposited) and contact pads 8 within the pocket (See Fig. 2)
- Applicant's argument that the prior art's pocket is a deformation in the ACF resulting from pressing the chip into the ACF is not persuasive because firstly the term pocket is a label and labels, statements of intended use, or functional language such as we have here does not structurally distinguish the claim over the prior art which shows a structure that may likewise be labeled, used or function as a pocket rather than a "deformation". See *In re Pearson* 181 USPQ 641, Ex parte Minks 169 USPQ 120, and *In re Swinwhart* 169 USPQ 226.

Moreover, how the pocket of the prior art became a pocket is not relevant and it is considered to be a "product by process" remark by the applicant. Applicant is reminded that a product claim is directed to the product per se, no matter how actually made, *In re Brown*, 173 USPQ 685; *In re Luck*, 177 USPQ 523; *In re Fessmann*, 180 USPQ 324; *In re Avery*, 186 USPQ 161; *In re Wertheim*, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); *In re Marosi et al*, 218

USPQ 289; and particularly *In re Thorpe*, 227 USPQ 964, all of which make it clear that it is the patentability of the final product per se which must be determined in a "product by process" claim, and not the patentability of the process, and that an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or not. Note that applicant has the burden of proof in such cases, as the above case law makes clear.

- The examiner maintains her position with regard to bonding pad 8 of the prior art. Again, Applicant is directed to the examiner's statements above regarding labels. Also, see that Applicant is arguing that the prior art's pad does not read on Applicant's bond pad for reasons that are not claimed, such as material and structural location. Although claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).
- Sako teaches partial engagement of the bumps and Fig. 2 illustrates such. Additionally, Applicant has failed to clearly describe such engagement in a way that one could differentiate it from the alleged permanent engagement in the device of the prior art.
- The examiner disagrees with Applicant's position that Sako teaches away from using a thermoplastic material. If anything, Sako does much more than suggesting its use.

- Flexible is a relative term, and a degree of flexibility has not been claimed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lourdes C. Cruz whose telephone number is 703-306-5691. The examiner can normally be reached on M-F 8:00- 4:30.

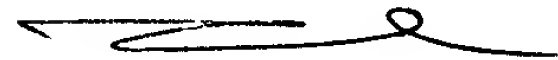
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Talbott can be reached on 703-305-9883. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

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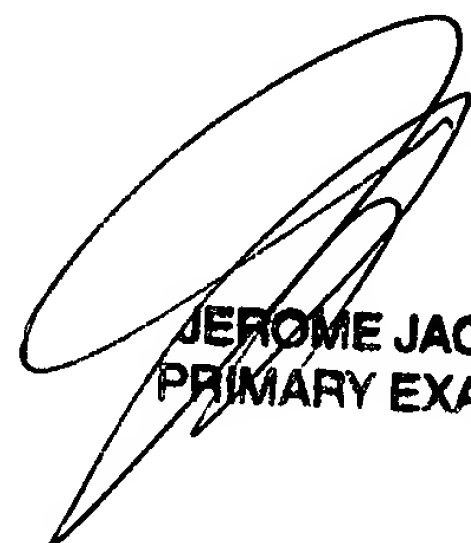
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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Lourdes C. Cruz
Examiner
Art Unit 2815



Lourdes Cruz
September 5, 2002



**JEROME JACKSON
PRIMARY EXAMINER**